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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,282	12/26/2000	Gene R. Anderson	1613370-0011	5695

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PATENT DEPARTMENT
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NEW YORK, NY 10036

EXAMINER

RAHLL, JERRY T

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/749,282	ANDERSON ET AL.	
	Examiner	Art Unit	
	Jerry T Rahll	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-34 and 36-80 is/are rejected.
- 7) ☒ Claim(s) 13 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-49, 51-60, 62-71 and 73-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,076,688 to Bowen et al. in view of U.S. Patent No. 6,305,848 to Gregory.

4. Bowen et al. describes a apparatus to attenuating the optical output of an optoelectronic connector having a mounting surface (2, 3), an optoelectronic device (21, 22) adapted to the mounting surface having a first end, an optical fiber packaged in a ferrule (11) having a first (15) and second end (16) positioned so that the optical elements are aligned to the optoelectronic devices, an optical path extending from the first end of optoelectronic device through the optical element and terminating at the second end of the optical element and an attenuator comprising a

on the first end surface of the optical element, capable of attenuating the optical energy emitted from the optoelectronic device, in the optical path (see Figures 1-3, Col 5 Ln 53-Col 6 Ln 28 and Claims 1, 2 and 4).

5. Bowen et al. does not describe the apparatus as having an array of optoelectronic devices or an array of optical elements. Gregory describes a device having arrays of optoelectronic devices (28, 60, 62, 64, 66) and a plurality of optical fibers (see Figures 2-4 and 7 and Col 4 Ln 49-Col 5 Ln 62. The optoelectronic devices described by Gregory are transmitters and receivers, as are the optoelectronic devices described by Bowen et al. It would have been obvious to one of ordinary skill in the art to modify the mating optical connector described by Gregory to have multiple implementations of the simulator described by Bowen et al. to allow for testing of the multiple optical transceivers described by Gregory.

6. While Bowen does not specifically describe the attenuating coating applied to the optoelectronic device or the second end of the optical fiber, it would have been obvious to one of ordinary skill in the art that such a coating would work equally well in any such position along the optical path and that placement of the coating could be changed for considerations such as ease of assembly.

7. Bowen et al. does not specifically describe the attenuator as capable of reflecting, scattering or absorbing optical energy. However, Examiner takes official notice that filters are well known in the art to have such properties. The attenuator described by Bowen et al. simply has "a filter". Therefore, it would have been obvious to one of ordinary skill in the art to use a filter having reflecting, scattering or absorbing properties.

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8. Bowen et al. does not specifically describe the attenuator as comprising smoked glass, frosted-glass, wavy-glass roughened inner surfaces or bubbles on an inner surface of portions of an optical fiber for an attenuator. However, Examiner takes official notice that such fibers are well known in the art to act as attenuators. Therefore, it would have been obvious to one of ordinary skill in the art to use such fibers as attenuators to reduce complexity by eliminating the need for a separate filter attenuator in addition to an optical fiber.

9. Bowen et al. does not specifically describe the optoelectronic device as an oxide vertical cavity surface emitting laser. However, Examiner takes official notice that oxide vertical cavity surface emitting laser are well known in the art as a common type of active transmitter. The attenuator described by Bowen et al. simply has an "active device". Therefore, it would have been obvious to one of ordinary skill in the art to use an oxide vertical cavity surface emitting laser for its favorable transmission properties.

10. Claims 50, 61 and 72 rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen et al. and Gregory as applied to claims 47, 59 and 70 above, and further in view of U.S. patent No. 4,145,110 to Szentesi. Bowen et al. and Gregory do not describe attenuating the optical signal by changing the relative position of the optical element to the optoelectronic device. Szentesi describes attenuating an optical signal by changing the relative position of two elements along an optical path. It would have been obvious to one of ordinary skill in the art to use the position adjustment attenuation method with the apparatus described by Bowen et al. and Gregory to allow for adjustability in the attenuation of the optical signal.

Response to Arguments

11. Regarding the Applicant's argument that Bowen does not disclose an attenuator situated in an optical path, the Examiner respectfully disagrees. Consider an apparatus such as in Claim 1 shown by Bowen in Figure 3 where the mounting surface is transmitter body (2), an optoelectronic device is a LED (21), the optical element is fiber (11) optically aligned to the optoelectronic device, the optical path extends from the LED through the fiber to the end near the detector (22) and the attenuator is the thin film on the fiber end face (15), which is clearly in the optical path described.

12. Regarding the Applicant's argument that there is no motivation to combine the Bowen and Gregory references, the Examiner respectfully disagrees. Gregory describes a plurality of transceivers mounted in an array. Bowen describes a testing apparatus for transceivers. One of ordinary skill in the art would be motivated to combine the two references to use the testing capabilities of Bowen to ensure the proper function of the transceivers described by Gregory.

13. Regarding the Applicant's argument that it would not have been obvious to one of ordinary skill in the art that the coating would work equally well at the second end of the optical fiber or on the optoelectronic device, the Examiner respectfully disagrees. U.S. Patent No. 3,996,461 to Sulzbach et al. describes a thin film filter (like the attenuator described by Bowen) applied directly to the surface of an optoelectronic device. Also, consider a different optical path suggested by Bowen where the mounting surface is the receiver body (3), an optoelectronic device is a detector (22), the optical element is fiber (11) optically aligned to the optoelectronic device, the optical path extends from the detector through the fiber to the end near the LED (21)

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and the attenuator is the thin film on the fiber end face (15). With this description, the attenuator is located on the second end of the optical fiber.

14. Regarding the Applicant's argument that it is not well known in the art that an attenuator is capable of reflecting, scattering, or absorbing optical energy, the Examiner respectfully disagrees. The Examiner directs the Applicant to U.S. Patent No. 6,097,873 to Filas et al. wherein Claim 20 describes an attenuating member for absorbing or scattering incident radiation. Also, the Applicant is directed to U.S. Patent No. 6,219,146 to Innes et al. at Column 4, Lines 31-33, which discuss attenuation by reflection.

15. Regarding the Applicant's argument that that attenuators comprising smoked glass, frosted-glass, roughened inner surfaces or bubbles on an inner surface were not well known in the art at the time of invention, the Examiner respectfully disagrees. The Applicant is directed to U.S. Patent No. 4,883,956 to Melcher et al. at Column 10, Lines 33-34, which discuss smoked glass attenuators. Further, the Applicant is directed to U.S. Patent No. 4,692,883 to Nelson et al. at Column 6, Line 51, which discusses a frosted glass attenuator. Further, the Applicant is directed to U.S. Patent No. 6,219,146 to Ohsawa et al. at Column 1, Lines 36-37, which discusses attenuation using roughened inner surfaces. Further, the Applicant is directed to U.S. Patent No. 6,219,146 to Leib at Column 3, Lines 63-64, which discusses attenuation using bubbles on an inner surface.

16. Regarding the Applicant's argument that that attenuators comprising wavy-glass were not well known in the art at the time of invention, the Examiner agrees and withdraws the rejection of Claims 13 and 35 describing such subject matter in the current application.

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17. Regarding the Applicant's argument that that oxide-contained VCSELs were not well known in the art at the time of invention, the Examiner respectfully disagrees. The Applicant is directed to U.S. Patent No. 6,411,638 to Johnson et al. at Column 2, Lines 32-35, which discuss oxide-confined VCSELs.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T Rahll whose telephone number is (703) 306-0031. The examiner can normally be reached on M-F (8:00-5:30), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jerry T Rahl


AKM ENAYET ULLAH
PRIMARY EXAMINER